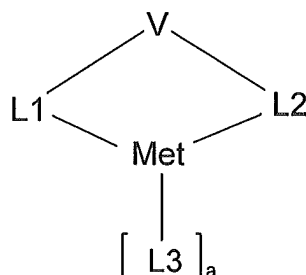


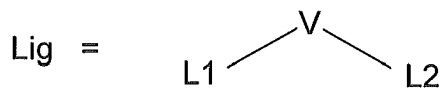
AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A compound of the Structure 1



Structure 1

wherein Structure 1 contains a metal Met, coordinated to a tetradentate chelating ligand Lig of Structure 2



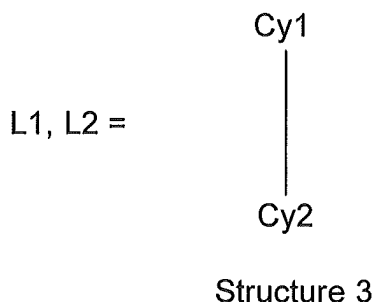
Structure 2

where V is a CR<sub>2</sub>

R is, identically or differently on each occurrence, H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 20 C atoms, where one or more non-adjacent CH<sub>2</sub> groups may be replaced by -R<sup>1</sup>C=CR<sup>1</sup>-, -C≡C-, Si(R<sup>1</sup>)<sub>2</sub>, Ge(R<sup>1</sup>)<sub>2</sub>, Sn(R<sup>1</sup>)<sub>2</sub>, C=O, C=S, C=Se, C=NR<sup>1</sup>, -O-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and where one or more H atoms may be replaced by F, or an aryl, aryloxy or heteroaryl group ~~having 1~~ having up to 14 C atoms, which may be substituted by one or more non-aromatic radicals R, where a plurality of substituents R may in turn define a further mono- or polycyclic, aliphatic or aromatic ring system;

R<sup>1</sup> is, identically or differently on each occurrence, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms;

V connects the two ligand moieties L1 and L2, which may be identical or different on each occurrence, covalently to one another, and where the two ligand moieties L1 and L2 satisfy Structure 3

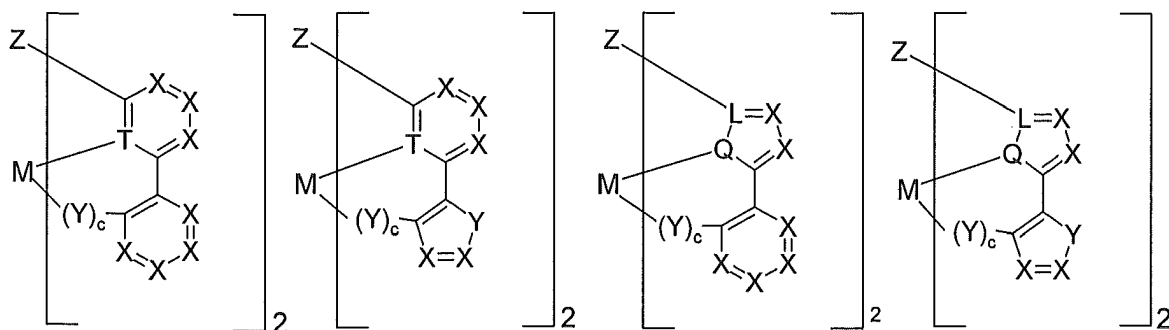
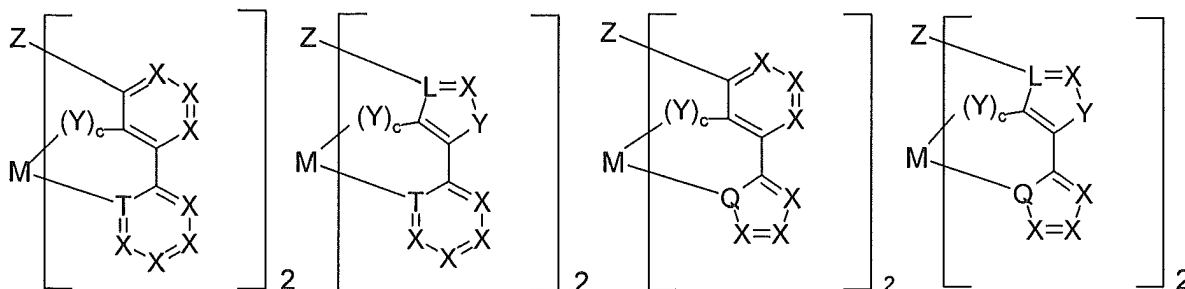


Cy1 is, identically or differently on each occurrence, a substituted or unsubstituted aromatic homo- or heterocyclic ring having 5 or 6 ring atoms, which is bonded ionically, covalently or coordinatively to the metal via a ring atom, Cy2 is, identically or differently on each occurrence, a substituted or unsubstituted aromatic homo- or heterocyclic ring having 5 or 6 ring atoms, which is bonded ionically, covalently or coordinatively to the metal via a ring atom; and Cy1 is not identical to Cy2 and one of the two rings bonds via a metal-carbon bond and the other via nitrogen, and Cy1 and Cy2 are linked to one another via substituents and thus define a polycyclic, aliphatic or aromatic ring system,

and where L3, identically or differently on each occurrence, is a mono- or bidentate, neutral or monoanionic ligand, and where a is 0, 1 or 2.

2. (Previously Presented) The compound according to Claim 1, wherein the compound is electrically neutral.
3. (Previously Presented) The compound according to Claim 1, wherein L1 = L2.
4. (Cancelled)
5. (Cancelled).

6. (Currently Amended) The compound as claimed in claim 1, selected from compounds (1) to (8), each of which may also carry one or two additional ligands L3

**Compounds (1)****Compounds (2)****Compounds (3)****Compounds (4)****Compounds (5)****Compounds (6)****Compounds (7)****Compounds (8)**

where:

M is Be, Mg, Ca, Sr, Ba, Al, Ga, In, Tl, Sc, Y, La, Cr, Mo, W, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd or Hg;

L is, identically or differently on each occurrence, C, N or P;

Q is, identically or differently on each occurrence, N, O, S, Se or Te;

T is, identically or differently on each occurrence, N or P;

X is, identically or differently on each occurrence, CR, N or P;

Y is, identically or differently on each occurrence,  $\text{NR}^1$ , O, S, Se, Te, SO, SeO, TeO,  $\text{SO}_2$ ,  $\text{SeO}_2$  or  $\text{TeO}_2$ ;

Z is  $\text{CR}_2$ ;

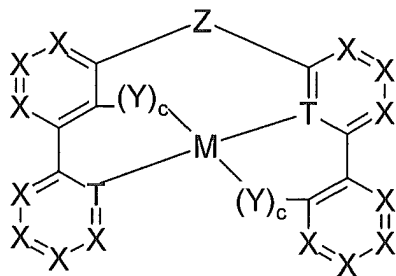
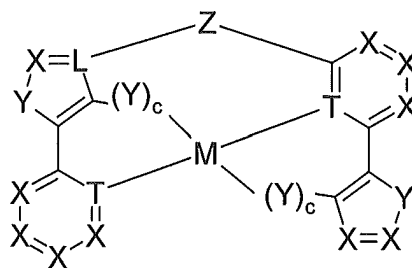
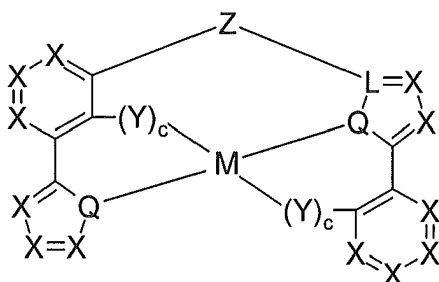
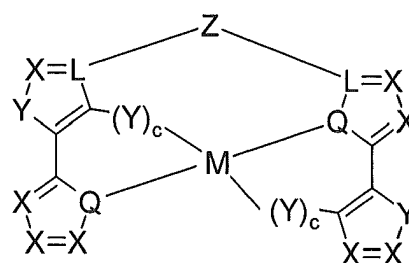
R is, identically or differently on each occurrence, H, F, Cl, Br, I,  $\text{NO}_2$ , CN, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 20 C atoms, where one or more non-adjacent  $\text{CH}_2$  groups may be replaced by  $-\text{R}^1\text{C}=\text{CR}^1-$ ,  $-\text{C}\equiv\text{C}-$ ,  $\text{Si}(\text{R}^1)_2$ ,  $\text{Ge}(\text{R}^1)_2$ ,  $\text{Sn}(\text{R}^1)_2$ ,  $\text{C}=\text{O}$ ,  $\text{C}=\text{S}$ ,  $\text{C}=\text{Se}$ ,  $\text{C}=\text{NR}^1$ ,  $-\text{O}-$ ,  $-\text{S}-$ ,  $-\text{NR}^1-$  or  $-\text{CONR}^1-$  and where one or more H atoms may be replaced by F, or an aryl, aryloxy or heteroaryl group having 1 to 14 C atoms, which may be substituted by one or more non-aromatic radicals R, where a plurality of substituents R may in turn define a further mono- or polycyclic, aliphatic or aromatic ring system;

and where a plurality of substituents R define a further mono- or polycyclic, aliphatic or aromatic ring system wherein the ring system is formed between the two cyclic groups of each partial ligand containing at least one X and wherein at least one X on each of the cyclic groups is CR,

$\text{R}^1$  is, identically or differently on each occurrence, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms; and

c is, identically or differently on each occurrence, 0 or 1.

7. (Currently Amended) The compound as claimed in claim 1, selected from compounds (9) to (12), each of which may also carry one or two additional ligands L3

**Compounds (9)****Compounds (10)****Compounds (11)****Compounds (12)**

where

M is Be, Mg, Ca, Sr, Ba, Al, Ga, In, Tl, Sc, Y, La, Cr, Mo, W, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd or Hg;

L is, identically or differently on each occurrence, C, N or P;

Q is, identically or differently on each occurrence, N, O, S, Se or Te;

T is, identically or differently on each occurrence, N or P;

X is, identically or differently on each occurrence, CR, N or P;

Y is, identically or differently on each occurrence, NR<sup>1</sup>, O, S, Se, Te, SO, SeO, TeO, SO<sub>2</sub>, SeO<sub>2</sub> or TeO<sub>2</sub>;

Z is CR<sub>2</sub>;

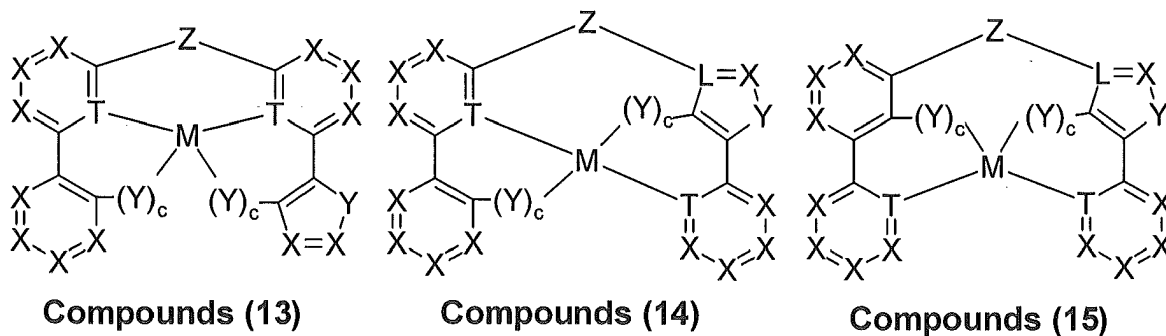
R is, identically or differently on each occurrence, H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 20 C atoms, where one or more non-adjacent CH<sub>2</sub> groups may be replaced by -R<sup>1</sup>C=CR<sup>1</sup>-, -C≡C-, Si(R<sup>1</sup>)<sub>2</sub>, Ge(R<sup>1</sup>)<sub>2</sub>, Sn(R<sup>1</sup>)<sub>2</sub>, C=O, C=S, C=Se, C=NR<sup>1</sup>, -O-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and where one or more H atoms may be replaced by F, or an aryl, aryloxy or heteroaryl group having 1 to 14 C atoms, which may be substituted by one or more non-aromatic radicals R, where a plurality of substituents R may in turn define a further mono- or polycyclic, aliphatic or aromatic ring system;

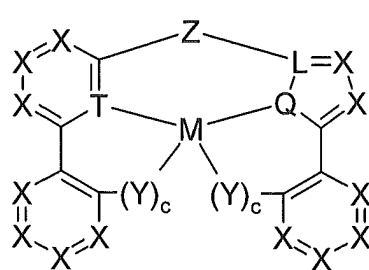
and where a plurality of substituents R define a further mono- or polycyclic, aliphatic or aromatic ring system wherein the ring system is formed between the two cyclic groups of each partial ligand containing at least one X and wherein at least one X on each of the cyclic groups is CR,

R<sup>1</sup> is, identically or differently on each occurrence, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms; and

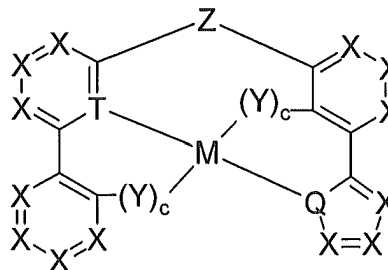
c is, identically or differently on each occurrence, 0 or 1.

8. (Currently Amended) The compound as claimed in claim 1, selected from compounds (13) to (30), each of which may also carry one or two additional ligands L3

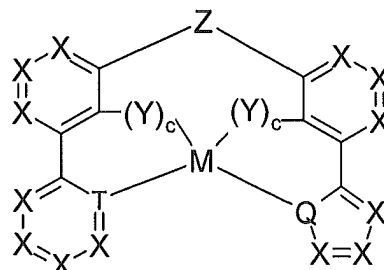




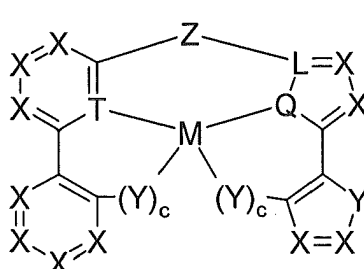
## Compounds (16)



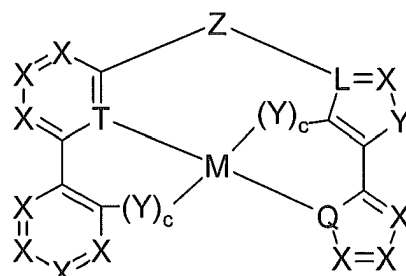
## Compounds (17)



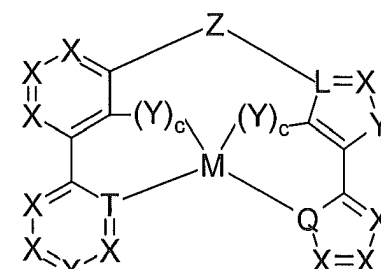
### Compounds (18)



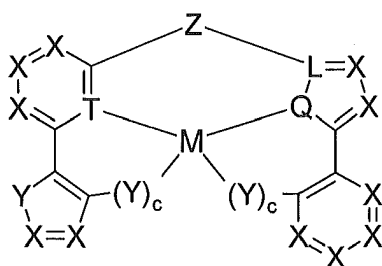
## Compounds (19)



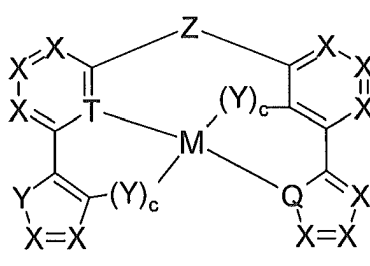
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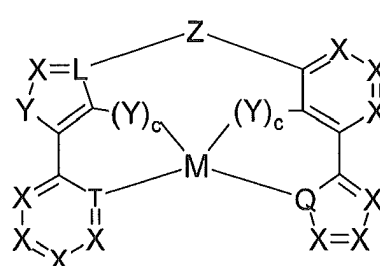
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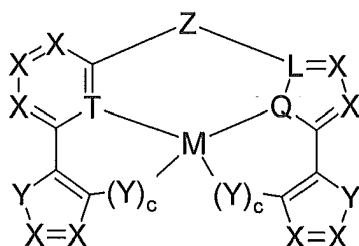
## Compounds (22)



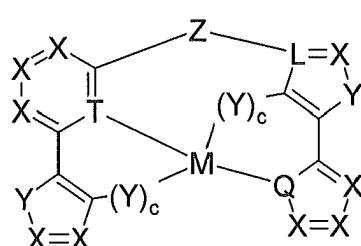
## Compounds (23)



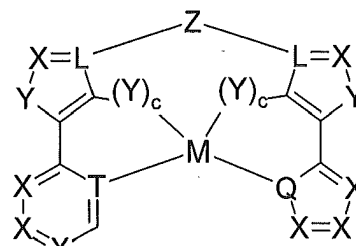
## Compounds (24)



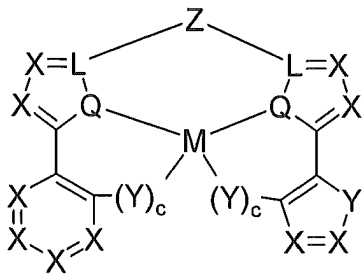
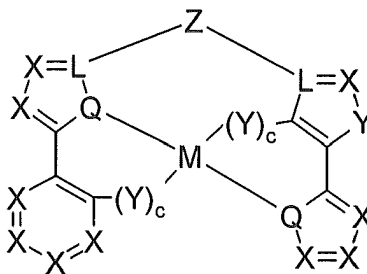
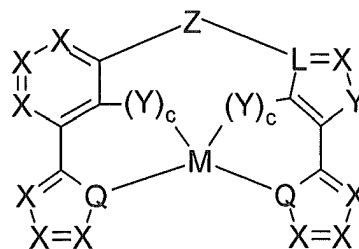
## Compounds (25)



## Compounds (26)



## Compounds (27)

**Compounds (28)****Compounds (29)****Compounds (30)**

where

M is Be, Mg, Ca, Sr, Ba, Al, Ga, In, Tl, Sc, Y, La, Cr, Mo, W, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd or Hg;

L is, identically or differently on each occurrence, C, N or P;

Q is, identically or differently on each occurrence, N, O, S, Se or Te;

T is, identically or differently on each occurrence, N or P;

X is, identically or differently on each occurrence, CR, N or P;

Y is, identically or differently on each occurrence, NR<sup>1</sup>, O, S, Se, Te, SO, SeO, TeO, SO<sub>2</sub>, SeO<sub>2</sub> or TeO<sub>2</sub>;

Z is CR<sub>2</sub>;

R is, identically or differently on each occurrence, H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 20 C atoms, where one or more non-adjacent CH<sub>2</sub> groups may be replaced by -R<sup>1</sup>C=CR<sup>1</sup>-, -C≡C-, Si(R<sup>1</sup>)<sub>2</sub>, Ge(R<sup>1</sup>)<sub>2</sub>, Sn(R<sup>1</sup>)<sub>2</sub>, C=O, C=S, C=Se, C=NR<sup>1</sup>, -O-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and where one or more H atoms may be replaced by F, or an aryl, aryloxy or heteroaryl group having 1 to 14 C atoms, which may be substituted by one or more non-aromatic radicals R, where

a plurality of substituents R may in turn define a further mono- or polycyclic, aliphatic or aromatic ring system;

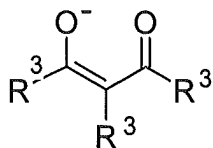
and where a plurality of substituents R define a further mono- or polycyclic, aliphatic or aromatic ring system wherein the ring system is formed between the two cyclic groups of each partial ligand containing at least one X and wherein at least one X on each of the cyclic groups is CR.

$R^1$  is, identically or differently on each occurrence, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms; and

c is, identically or differently on each occurrence, 0 or 1.

9. (Previously presented) The compound as claimed in claim 1, wherein ligand L3, if present, is a bidentate chelating ligand.

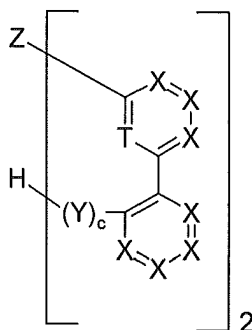
10. (Previously presented) The compound according to Claim 9, wherein L3 is present and is a monoanionic ligand which is identical to or different from ligand moieties L1 and L2 or in that L3 is a ligand of structure (4)



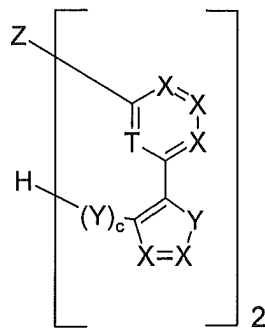
Structure (4)

where  $R^3$ , identically or differently on each occurrence, represents H, a  $C_1$  to  $C_{20}$  alkyl group, a  $C_1$  to  $C_{20}$  alkoxy group, a  $C_4$  to  $C_{20}$  aryl or heteroaryl group or a  $C_4$  to  $C_{20}$  aryloxy or heteroaryloxy group, and one or more H atoms may be replaced by F.

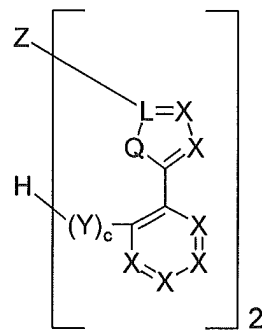
11. (Previously presented) The compound according to claim 6, wherein the symbol  $M = \text{Be, Mg, Pt or Zn}$ , and the index  $a = 0$ .
12. (Previously presented) The compound according to Claim 11, wherein the symbol  $c = 0$  and  $M = \text{Pt}$ .
13. (Previously presented) The compound according to claim 6, wherein the symbol  $M = \text{Rh or Ir}$ , and the index  $a = 1$  in the case of a bidentate monoanionic ligand  $L3$  or  $a = 2$  in the case of a monodentate monoanionic ligand  $L3$ .
14. (Previously presented) The compound according to claim 6, wherein the symbol  $L = \text{C or N}$ .
15. (Previously presented) The compound according to claim 1, wherein the symbol  $Q = \text{O or S}$ .
16. (Previously presented) The compound according to claim 6, wherein the symbol  $T = \text{N}$ .
17. (Previously presented) The compound according to claim 6, wherein the symbol  $X = \text{CR or N}$ .
18. (Cancelled)
19. (Previously presented) The compound according to claim 5, wherein the symbol  $R = \text{H, F, Cl, Br, I, CN, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 6 C atoms or an aryl or heteroaryl group having 3 to 10 C atoms, which may be substituted by one or more non-aromatic radicals R, where a plurality of substituents R, both on the same ring and also on the two different rings, may together in turn define a further mono- or polycyclic ring system}$ .
20. (Withdrawn) (Currently Amended) Compounds (31) to (60)



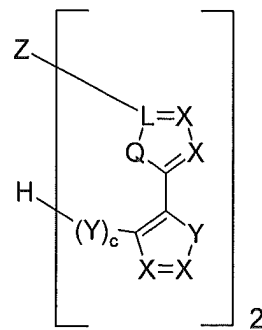
Compounds (31)



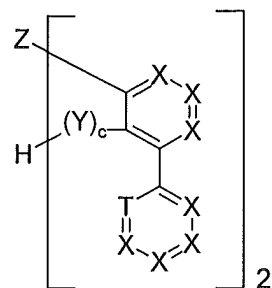
Compounds (32)



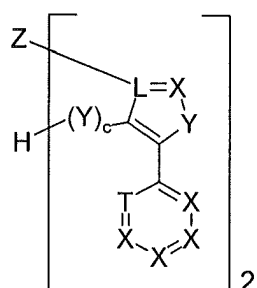
Compounds (33)



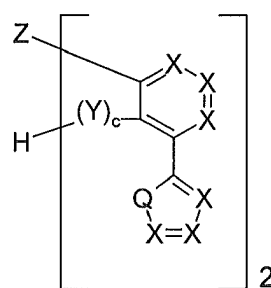
Compounds (34)



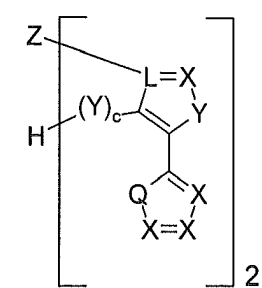
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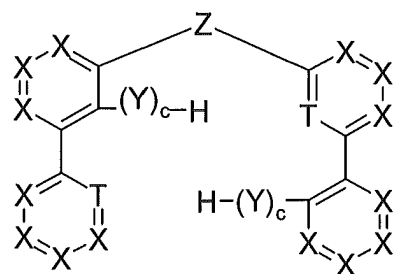
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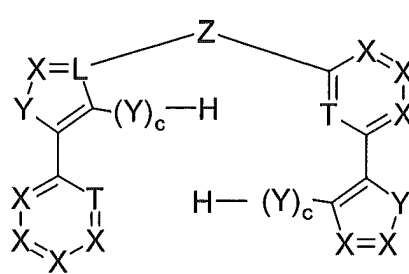
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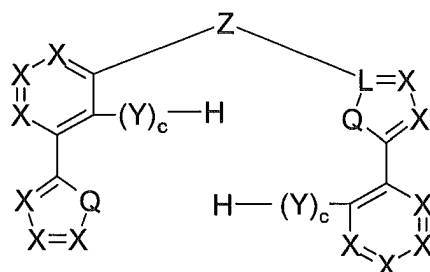
Compounds (38)



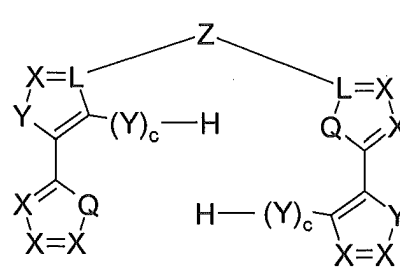
Compounds (39)



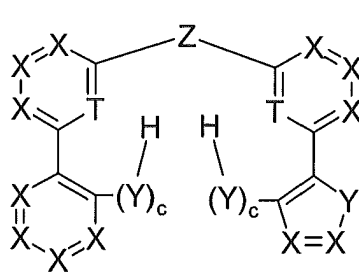
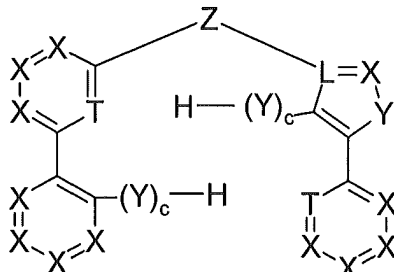
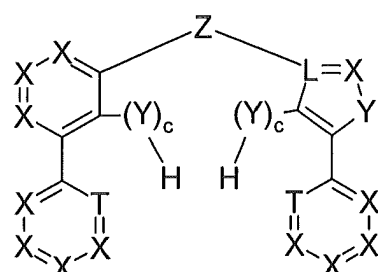
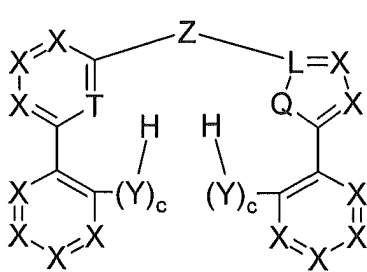
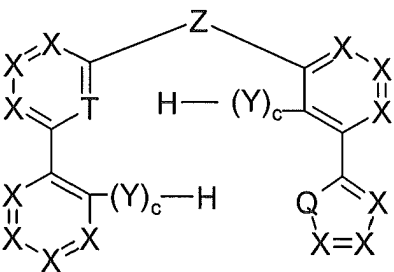
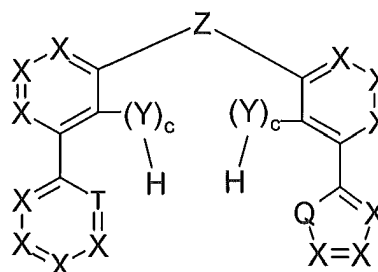
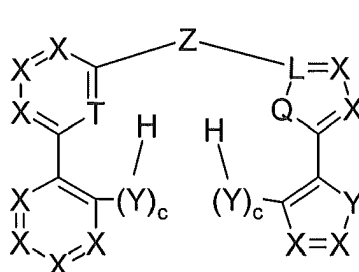
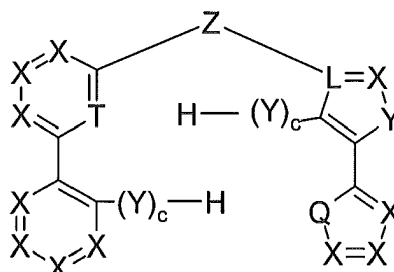
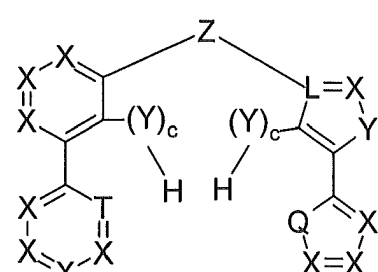
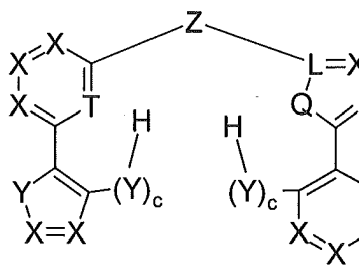
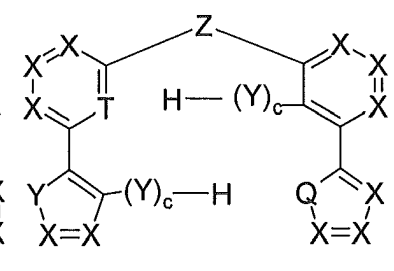
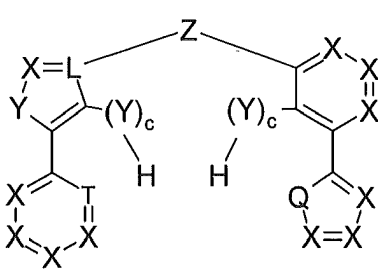
Compounds (40)

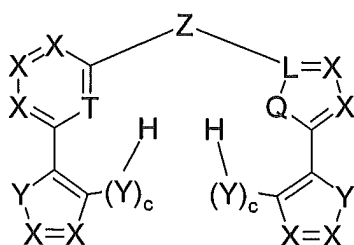
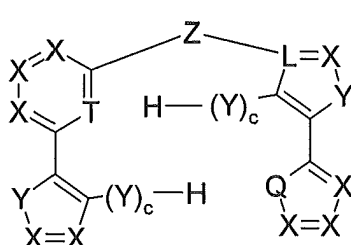
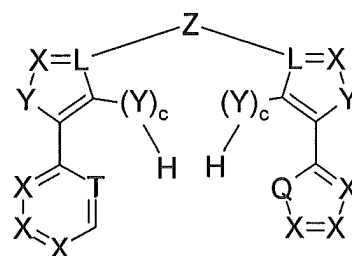
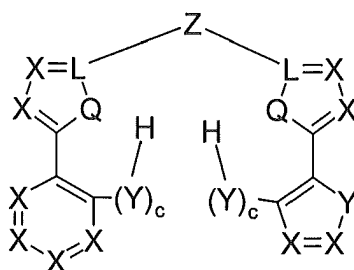
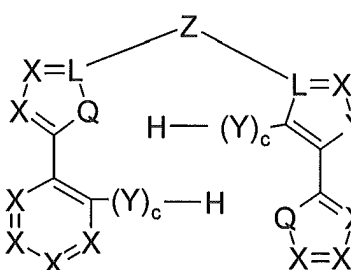
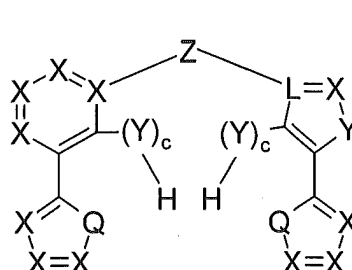


Compounds (41)



Compounds (42)

**Compounds (43)****Compounds (44)****Compounds (45)****Compounds (46)****Compounds (47)****Compounds (48)****Compounds (49)****Compounds (50)****Compounds (51)****Compounds (52)****Compounds (53)****Compounds (54)**

**Compounds (55)****Compounds (56)****Compounds (57)****Compounds (58)****Compounds (59)****Compounds (60)**

where

L is, identically or differently on each occurrence, C, N or P;

Q is, identically or differently on each occurrence, N, O, S, Se or Te;

T is, identically or differently on each occurrence, N or P;

X is, identically or differently on each occurrence, CR, N or P;

Y is, identically or differently on each occurrence, NR<sup>1</sup>, O, S, Se, Te, SO, SeO, TeO, SO<sub>2</sub>, SeO<sub>2</sub> or TeO<sub>2</sub>;

Z is CR<sub>2</sub>;

~~R is, identically or differently on each occurrence, H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight chain, branched or cyclic alkyl or alkoxy group having 1 to 20 C atoms, where one or more non-adjacent CH<sub>2</sub> groups may be replaced by R<sup>1</sup>C=CR<sup>1</sup>, C=C, Si(R<sup>1</sup>)<sub>2</sub>, Ge(R<sup>1</sup>)<sub>2</sub>, Sn(R<sup>1</sup>)<sub>2</sub>, C=O, C=S, C=Se, C=NR<sup>1</sup>, O, S, NR<sup>1</sup> or~~

~~CONR<sup>+</sup>—and where one or more H atoms may be replaced by F, or an aryl, aryloxy or heteroaryl group having 1 to 14 C atoms, which may be substituted by one or more non-aromatic radicals R,~~

where a plurality of substituents R ~~may in turn~~ defines a further mono- or polycyclic, aliphatic or aromatic ring system;

~~R<sup>+</sup>— is, identically or differently on each occurrence, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms; and~~

c ~~is, identically or differently on each occurrence, 0 or 1. is 0,~~

with the proviso the compounds bis(6-phenyl-2-pyridyl)methane, bis(6-phenyl-2-pyridyl)ketone, bis(6-(1-hydroxy-3,5-di-tert-butyl)phenyl-2-pyridyl)methanol, 2,2'-thiobis(3-cyano-2,4-diphenyl)pyridine, bis(6-(3-phenyl)phenyl-2-pyridyl)methane and isomers are excluded.

21. (Cancelled)

22. (Previously presented) The compound according to claim 1, wherein the compound has a purity (determined by <sup>1</sup>H-NMR and/or HPLC) that is greater than 99%.

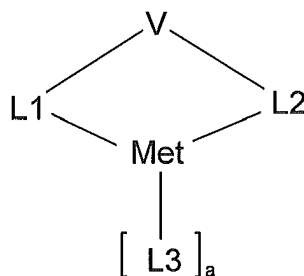
23. (Cancelled)

24. (Previously presented) The polymer or dendrimer according to Claim 30, wherein at least one radical R represents a bond to the polymer or dendrimer.

25. (Previously presented) The polymer according to claim 24, wherein the polymer is a polyfluorene, polyspirobifluorene, poly-para-phenylene, polydihydrophenanthrene, polyindenofluorene, polycarbazole, polythiophene, polyketone, polyvinylcarbazole or copolymers which have a plurality of the units mentioned here.

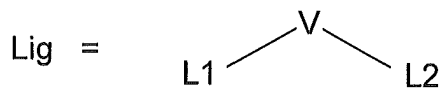
26. (Previously presented) An electronic device comprising at least a polymer, a copolymer or a dendrimer according to claim 30.

27. (Previously presented) The electronic device according to Claim 26, wherein the device is an organic light-emitting diode (OLED), an organic integrated circuit (O-IC), an organic field-effect transistor (OFET), an organic thin-film transistor (OTFT), an organic solar cell (O-SC) or an organic laser diode (O-laser).
28. (Previously presented) An electronic device comprising at least one compound according to claim 1.
29. (Currently Amended) A process for the preparation of ~~a compound~~ the compound of Structure 1 as claimed in claim 1,



Structure 1

wherein Structure 1 contains a metal Met, coordinated to a tetradentate chelating ligand Lig of Structure 2



Structure 2

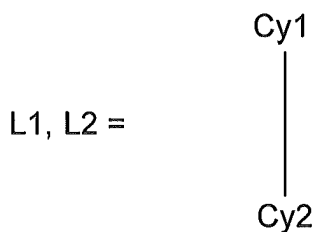
where V is CR<sub>2</sub>

R is, identically or differently on each occurrence, H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 20 C atoms, where one or more non-adjacent CH<sub>2</sub> groups may be replaced by -R<sup>1</sup>C=CR<sup>1</sup>-, -C≡C-, Si(R<sup>1</sup>)<sub>2</sub>, Ge(R<sup>1</sup>)<sub>2</sub>, Sn(R<sup>1</sup>)<sub>2</sub>, C=O, C=S, C=Se, C=NR<sup>1</sup>, -O-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and where one

or more H atoms may be replaced by F, or an aryl, aryloxy or heteroaryl group ~~having 1~~ having up to 14 C atoms, which may be substituted by one or more non-aromatic radicals R, where a plurality of substituents R may in turn define a further mono- or polycyclic, aliphatic or aromatic ring system;

R<sup>1</sup> is, identically or differently on each occurrence, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms;

and V connects the two ligand moieties L1 and L2, which may be identical or different on each occurrence, covalently to one another, and where the two ligand moieties L1 and L2 satisfy Structure 3

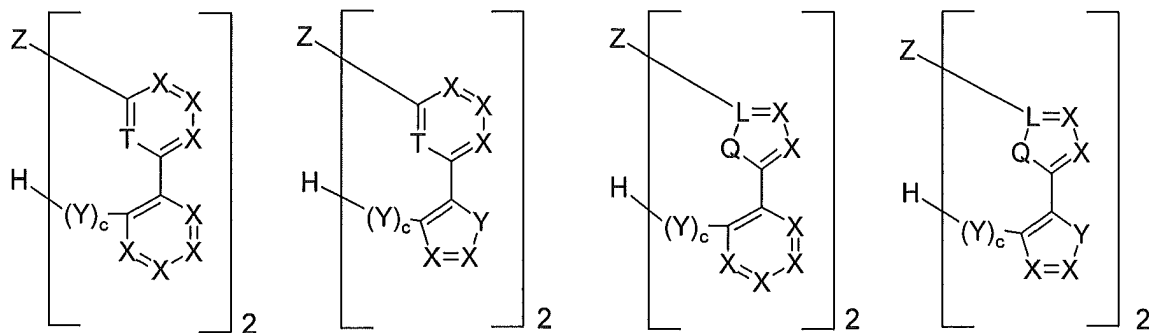
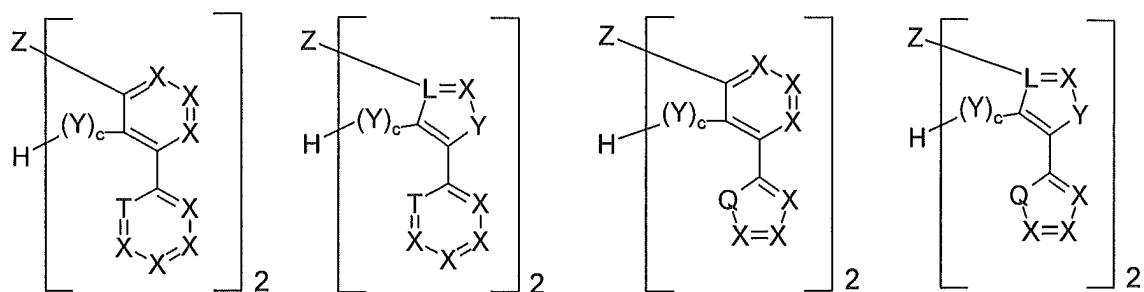
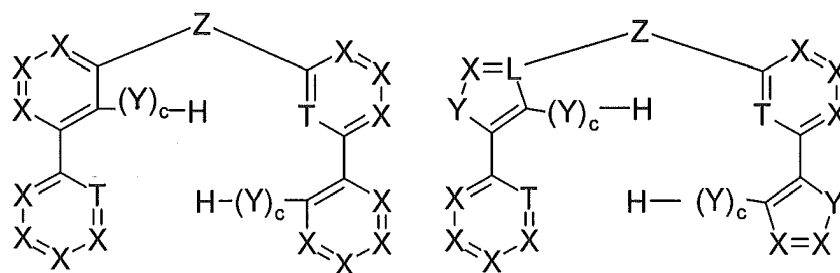


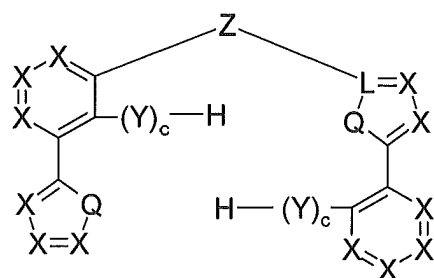
Structure 3

Cy1 is, identically or differently on each occurrence, a substituted or unsubstituted aromatic homo- or heterocyclic ring having 5 or 6 ring, which is bonded ionically, covalently or coordinatively to the metal via a ring atom, Cy2 is, identically or differently on each occurrence, a substituted or unsubstituted aromatic homo- or heterocyclic ring having 5 or 6 ring atoms, which is bonded ionically, covalently or coordinatively to the metal via a ring atom; and Cy1 is not identical to Cy2 and one of the two rings bonds via a metal-carbon bond and the other via nitrogen, and  
Cy1 and Cy2 are linked to one another via substituents and thus define a polycyclic, aliphatic or aromatic ring system.

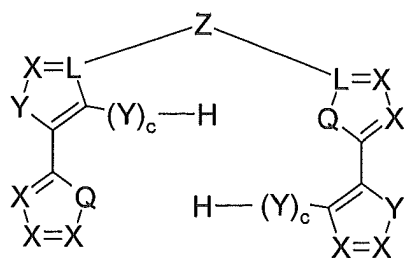
and where L3, identically or differently on each occurrence, is a mono- or bidentate, neutral or monoanionic ligand, and where a is 0, 1 or 2,

which comprises reacting compounds (31) to (60) with metal alkoxides of compound (61), with metal ketoketonates of compound (62), metal halides, carboxylates, nitrates and sulfates of compound (63) or alkyl- or arylmetal compounds of compound (64)

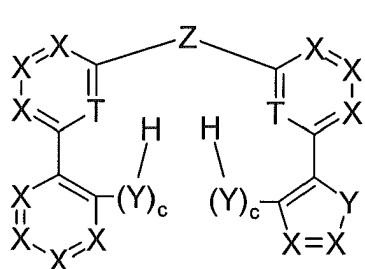
**Compounds (31)****Compounds (32)****Compounds (33)****Compounds (34)****Compounds (35)****Compounds (36)****Compounds (37)****Compounds (38)****Compounds (39)****Compounds (40)**



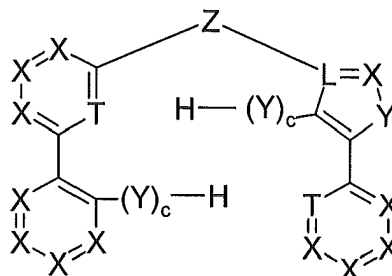
### Compounds (41)



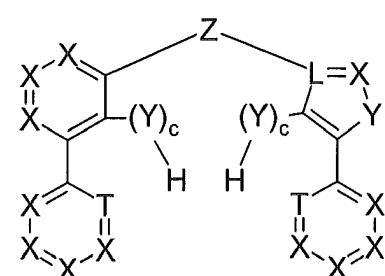
### Compounds (42)



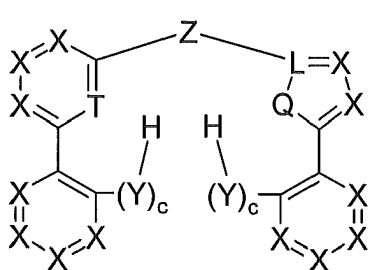
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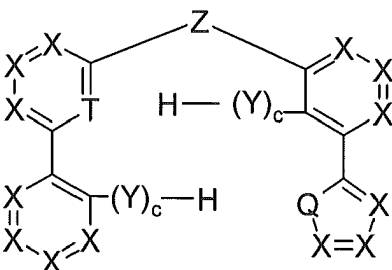
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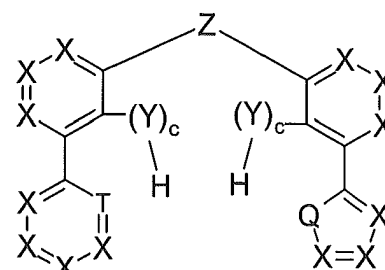
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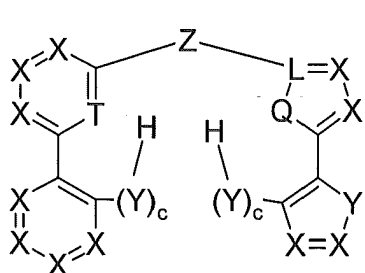
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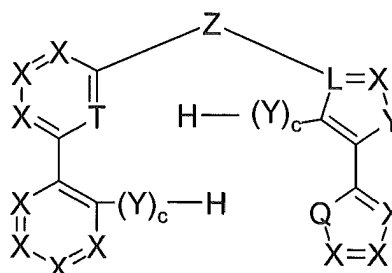
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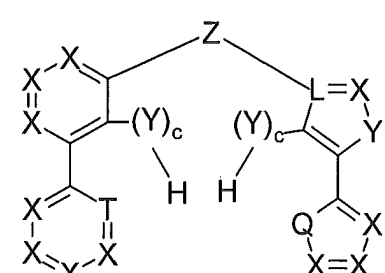
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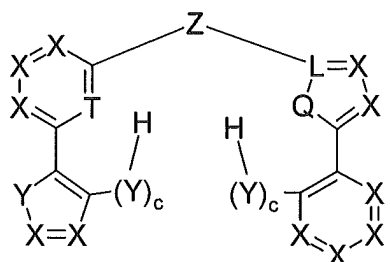
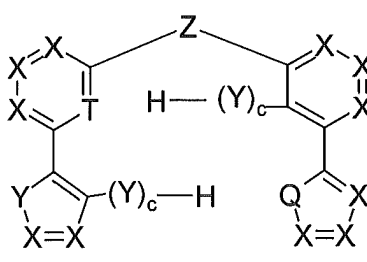
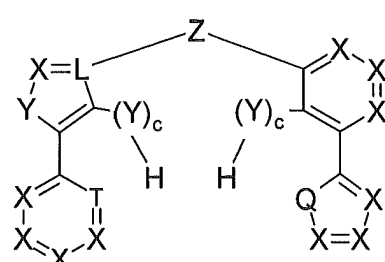
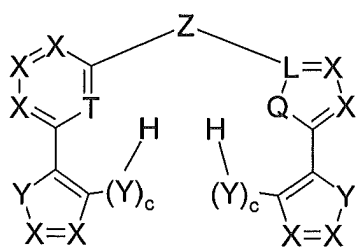
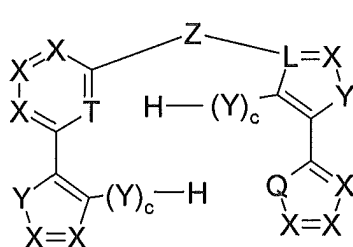
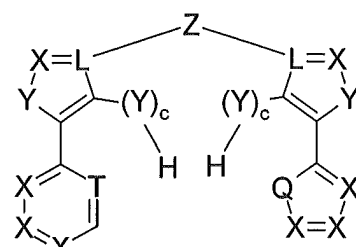
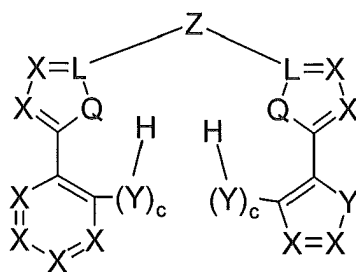
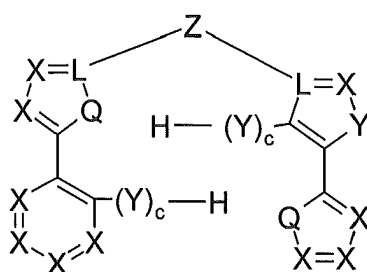
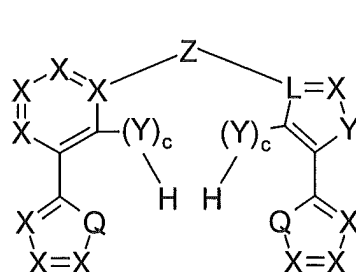
## Compounds (49)



## Compounds (50)



## Compounds (51)

**Compounds (52)****Compounds (53)****Compounds (54)****Compounds (55)****Compounds (56)****Compounds (57)****Compounds (58)****Compounds (59)****Compounds (60)**

wherein

L is, identically or differently on each occurrence, C, N or P;

Q is, identically or differently on each occurrence, N, O, S, Se or Te;

T is, identically or differently on each occurrence, N or P;

X is, identically or differently on each occurrence, CR, N or P;

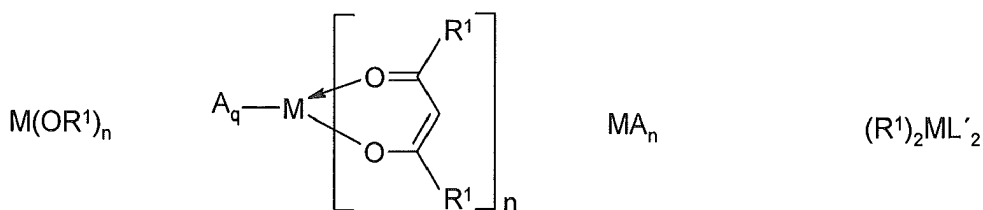
Y is, identically or differently on each occurrence,  $\text{NR}^1$ , O, S, Se, Te, SO, SeO, TeO,  $\text{SO}_2$ ,  $\text{SeO}_2$  or  $\text{TeO}_2$ ;

$\text{R}^1$  is defined above;

Z is  $\text{CR}_2$ ;

R is defined above,

c is, identically or differently on each occurrence, 0 or 1,



**Compounds (61)**

**Compounds (62)**

**Compounds (63)**

**Compounds (64)**

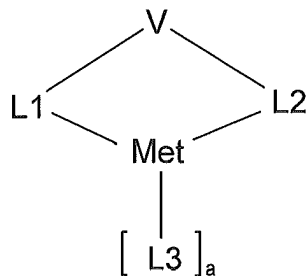
wherein the symbols M and  $\text{R}^1$ ,

M is Be, Mg, Ca, Sr, Ba, Al, Ga, In, Tl, Sc, Y, La, Cr, Mo, W, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd or Hg;

$\text{R}^1$  is defined above;

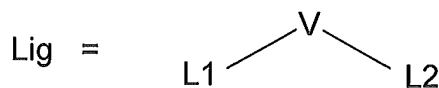
and the symbol A = F, Cl, Br, I, OH, formate, acetate, propionate, benzoate, nitrate or sulfate, and  $\text{L}'$  is a monodentate ligand and  $n = 1, 2$  or  $3$  and  $q = 0, 1, 2$  or  $3$ .

30. (Currently Amended) A ~~conjugated~~-conjugated-, partially conjugated and/or non-conjugated polymer or dendrimer comprising one or more compounds of Structure 1



Structure 1

wherein Structure 1 contains a metal Met, coordinated to a tetradentate chelating ligand Lig of Structure 2



Structure 2

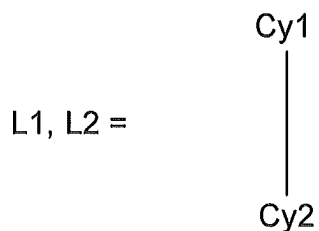
where V is CR<sub>2</sub>;

R is, identically or differently on each occurrence, H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain, branched or cyclic alkyl or alkoxy group having 1 to 20 C atoms, where one or more non-adjacent CH<sub>2</sub> groups may be replaced by -R<sup>1</sup>C=CR<sup>1</sup>-, -C≡C-, Si(R<sup>1</sup>)<sub>2</sub>, Ge(R<sup>1</sup>)<sub>2</sub>, Sn(R<sup>1</sup>)<sub>2</sub>, C=O, C=S, C=Se, C=NR<sup>1</sup>, -O-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and where one or more H atoms may be replaced by F, or an aryl, aryloxy or heteroaryl group having 1 to 14 C atoms, which may be substituted by one or more non-aromatic radicals R, where a plurality of substituents R may in turn define a further mono- or polycyclic, aliphatic or aromatic ring system;

R<sup>1</sup> is, identically or differently on each occurrence, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms;

and V connects the two ligand moieties L1 and L2, which may be identical or different on each occurrence, covalently to one another, and where the two ligand moieties L1 and L2 satisfy

Structure 3

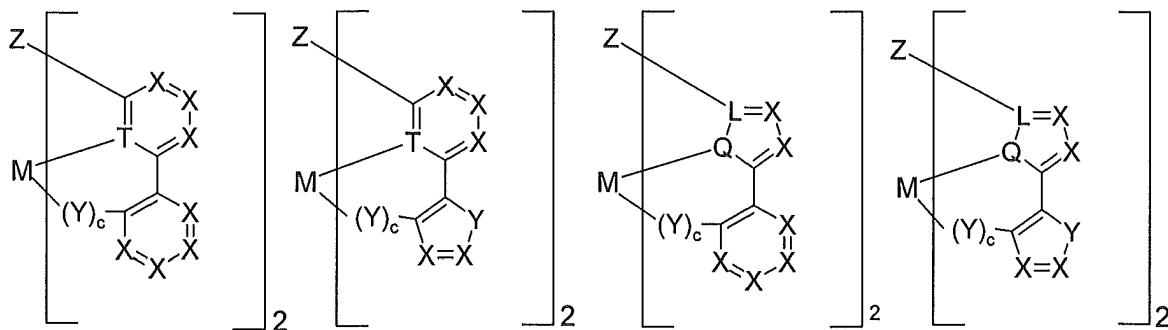


Structure 3

Cy1 is, identically or differently on each occurrence, a substituted or unsubstituted aromatic homo- or heterocyclic ring having 5 or 6 ring, which is bonded ionically, covalently or coordinatively to the metal via a ring atom, Cy2 is, identically or differently on each occurrence, a substituted or unsubstituted aromatic homo- or heterocyclic ring having 5 or 6 ring atoms, which is bonded ionically, covalently or coordinatively to the metal via a ring atom; and Cy1 is not identical to Cy2 and one of the two rings bonds via a metal-carbon bond and the other via nitrogen,

and where L3, identically or differently on each occurrence, is a mono- or bidentate, neutral or monoanionic ligand, and where a is 0, ~~1 or 2~~,

or compounds (1) to (12)

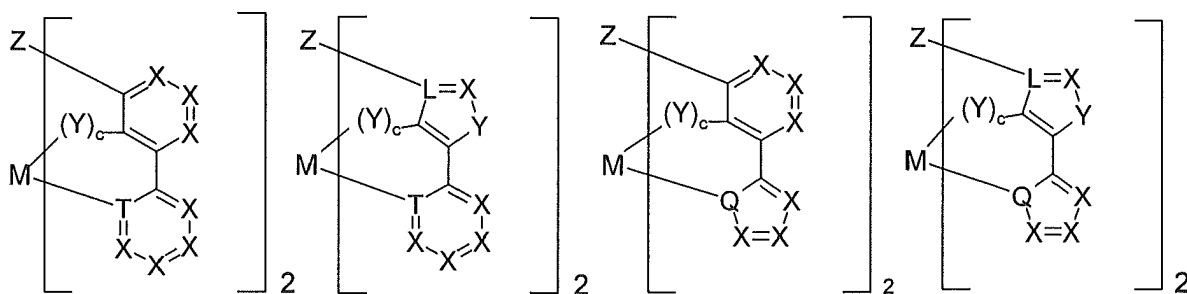


**Compounds (1)**

**Compounds (2)**

**Compounds (3)**

**Compounds (4)**

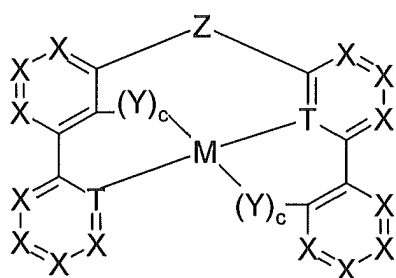


**Compounds (5)**

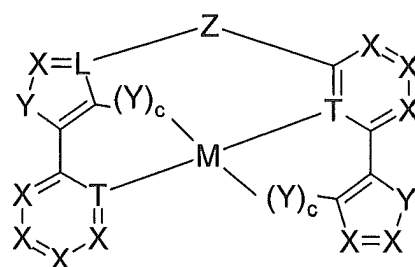
**Compounds (6)**

**Compounds (7)**

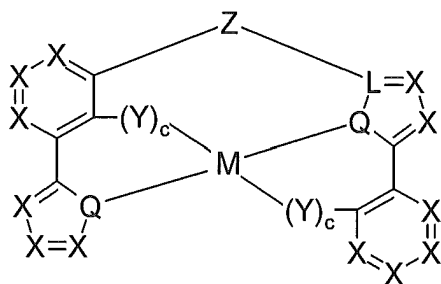
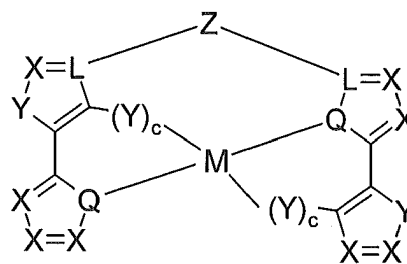
**Compounds (8)**



**Compounds (9)**



**Compounds (10)**

**Compounds (11)****Compounds (12)**

wherein

R is defined above; R<sup>1</sup> is defined above;

M is Be, Mg, Ca, Sr, Ba, Al, Ga, In, Tl, Sc, Y, La, Cr, Mo, W, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd or Hg;

L is, identically or differently on each occurrence, C, N or P;

Q is, identically or differently on each occurrence, N, O, S, Se or Te;

T is, identically or differently on each occurrence, N or P;

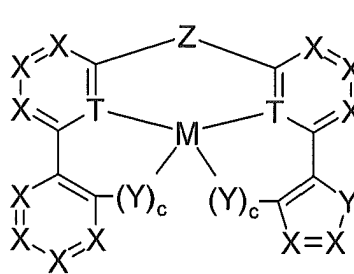
X is, identically or differently on each occurrence, CR, N or P;

Y is, identically or differently on each occurrence, NR<sup>1</sup>, O, S, Se, Te, SO, SeO, TeO, SO<sub>2</sub>, SeO<sub>2</sub> or TeO<sub>2</sub>;

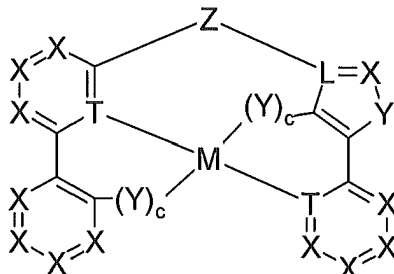
Z is CR<sub>2</sub>

c is, identically or differently on each occurrence, 0 or 1 is 0;

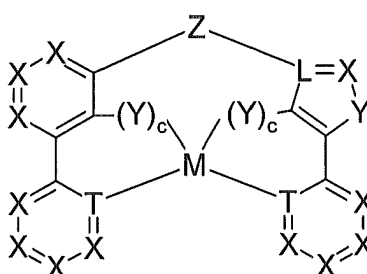
or compounds (13) to (30)



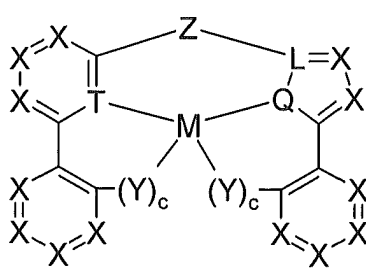
### Compounds (13)



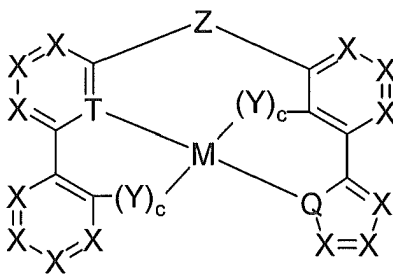
## Compounds (14)



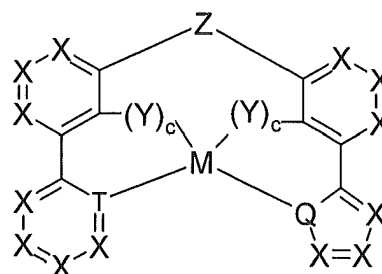
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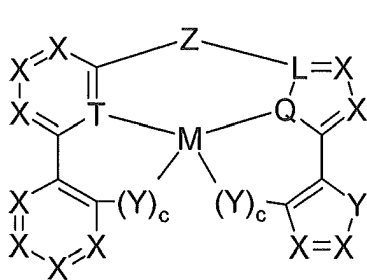
## Compounds (16)



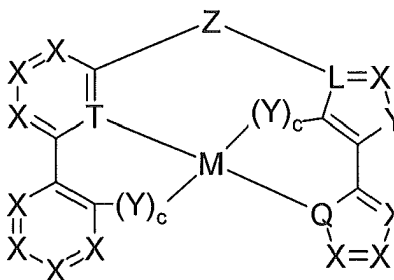
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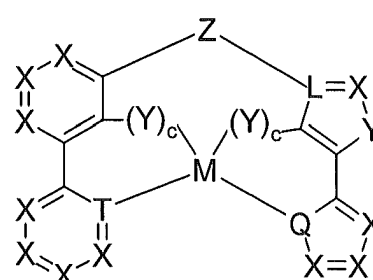
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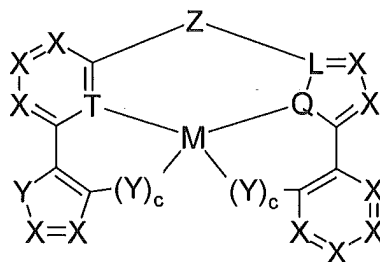
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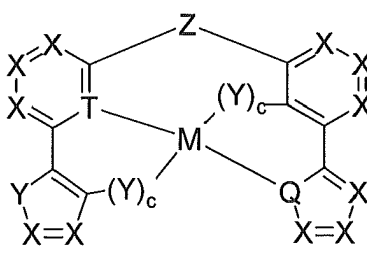
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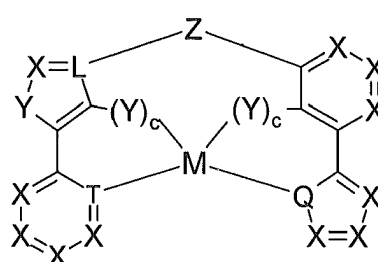
## Compounds (21)



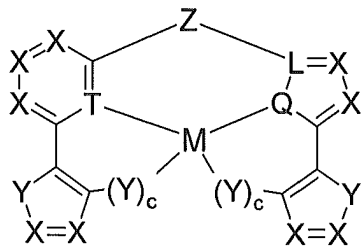
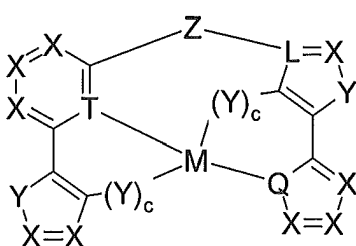
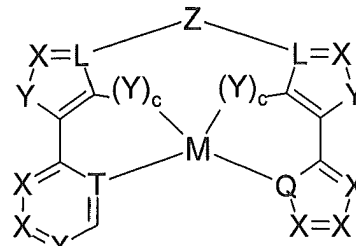
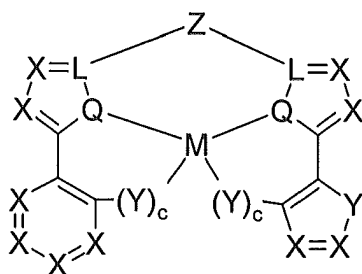
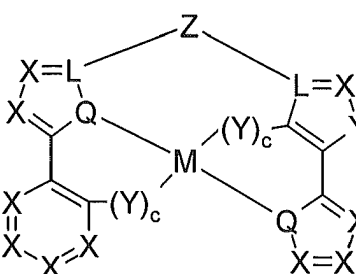
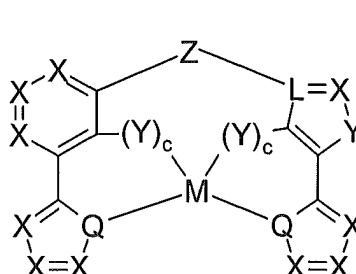
## Compounds (22)



### Compounds (23)

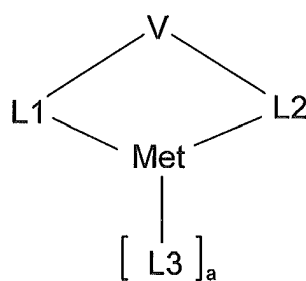


### Compounds (24)

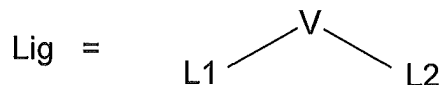
**Compounds (25)****Compounds (26)****Compounds (27)****Compounds (28)****Compounds (29)****Compounds (30)**

where the symbols and indices  $R$ ,  $R^1$ ,  $R^2$ ,  $M$ ,  $L$ ,  $Q$ ,  $T$ ,  $X$ ,  $Y$ ,  $Z$  and  $c$  are defined above.

31. (New) A compound of the Structure 1

**Structure 1**

wherein Structure 1 contains a metal  $Met$ , coordinated to a tetradentate chelating ligand  $Lig$  of Structure 2

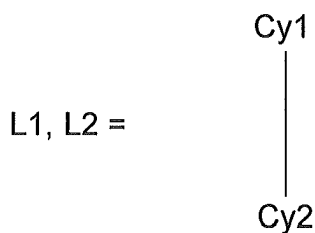


Structure 2

where V is a  $\text{CR}_2$

a plurality of substituents R defines in turn a further mono- or polycyclic, aliphatic or aromatic ring system,

connects the two ligand moieties L1 and L2, which may be identical or different on each occurrence, covalently to one another, and where the two ligand moieties L1 and L2 satisfy Structure 3



Structure 3

Cy1 is, identically or differently on each occurrence, a substituted or unsubstituted aromatic homo- or heterocyclic ring having 5 or 6 ring atoms, which is bonded ionically, covalently or coordinatively to the metal via a ring atom, Cy2 is, identically or differently on each occurrence, a substituted or unsubstituted aromatic homo- or heterocyclic ring having 5 or 6 ring atoms, which is bonded ionically, covalently or coordinatively to the metal via a ring atom; and Cy1 is not identical to Cy2 and one of the two rings bonds via a metal-carbon bond and the other via nitrogen,

and where L3, identically or differently on each occurrence, is a mono- or bidentate, neutral or monoanionic ligand, and where a is 0.